Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of identifying a compound that modulates ~~an~~ immune ~~response~~ cell activation via a pathway that does not involve NFATp or NFAT4, ~~response~~ comprising:

a) contacting immune cells obtained from a mouse deficient in NFATp and NFAT4, wherein the phenotype of the mouse is characterized by increased Th2 cytokine production, with a test compound; and

b) determining the effect of the test compound on the activation of immune cells, the test compound being identified as a modulator of ~~an~~ immune ~~response~~ cell activation via a pathway that does not involve NFATp or NFAT4, based on the ability of the test compound to modulate the activation of immune cells obtained from a mouse deficient in NFATp and NFAT4, to thereby identify a compound that modulates immune cell activation via a pathway that does not involve NFATp or NFAT4.

2-31. (Canceled)

32. (Currently Amended) A transgenic mouse comprising in its genome a first exogenous ~~nucleic acid~~ DNA molecule that functionally disrupts a NFATp gene of said mouse and a second exogenous ~~nucleic acid~~ DNA molecule that functionally disrupts a NFAT4 gene of said mouse.

33. (Currently Amended) The transgenic mouse of claim 32, 49, and 52, wherein the phenotype of said mouse is characterized by lymphadenopathy relative to a wild-type mouse.

34. (Currently Amended) The transgenic mouse of claim 32, 49, and 52, wherein the phenotype of said mouse is characterized by splenomegaly relative to a wild-type mouse.

35. (Currently Amended) The transgenic mouse of claim 32, 49, and 52, wherein the phenotype of said mouse is characterized by ~~blepharatis~~ blepharitis relative to a wild-type mouse.

36. (Currently Amended) The transgenic mouse of claim 32, 49, and 52, wherein the phenotype of said mouse is characterized by interstitial pneumonitis relative to a wild-type mouse.

37. (Currently Amended) The transgenic mouse of claim 32, 49, and 52, wherein said mouse displays an increase in peripheral T cells relative to a wild-type mouse.

38. (Currently Amended) The ~~transgenino~~ transgenic mouse of claim 37, wherein said peripheral T cells have a memory/activated phenotype relative to a wild-type mouse.

39. (Currently Amended) The transgenic mouse of claim 32, 49, and 52, wherein said mouse displays ~~compromised~~ reduced FasL expression relative to a wild-type mouse.

40. (Previously Presented) The transgenic mouse of claim 39, wherein said mouse displays defective apoptosis relative to a wild-type mouse.

41. (Currently Amended) The transgenic mouse of claim 32, 49, and 52, wherein said mouse displays increased Th2 cytokine production relative to a wild-type mouse.

42. (Previously Presented) The transgenic mouse of claim 41, wherein said Th2 cytokine is IL-4.

43. (Previously Presented) The transgenic mouse of claim 42, wherein said mouse displays increased expression of IL-4 dependent immunoglobulin isotypes.

44. (Previously Presented) The transgenic mouse of claim 43, wherein said immunoglobulin isotypes are IgG1 and IgE.

45. (Currently Amended) A method for identifying a test compound that ~~regulates Th2 cell activity~~ modulates immune cell activation via a pathway that does not involve NFATp or NFAT4 comprising:

~~a) providing:~~

~~i)~~ administering said test compound to a first transgenic mouse ~~first and second transgenic mice~~ comprising a genome deficient in NFATp and NFAT4; ~~and~~

~~ii) a composition comprising said test compound; and~~

b) administering an appropriate control compound to a second transgenic mouse comprising a genome deficient in NFATp and NFAT4, wherein the phenotype of the first transgenic mouse and the second transgenic mouse is characterized by increased Th2 cytokine production, ~~administering said test compound to said first transgenic mouse~~; and

c) evaluating Th2 cell activity in said first transgenic mouse relative to Th2 cell activity in said second transgenic mouse to thereby identify a compound that regulates ~~Th2 cell activity~~ immune cell activation via a pathway that does not involve NFATp or NFAT4.

46. (Currently Amended) The method of claim 45, wherein said test compound is ~~at least one~~ a peptidic compound derived from the calcineurin-interacting region of NFATp or NFAT4.

47. (Previously Presented) The method of claim 45, wherein said test compound comprises the amino acid sequence of SEQ ID NO: 1.

48. (Previously Presented) The method of claim 45, wherein said peptidic compound comprises the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 3.

49. (Currently Amended) A method for producing a transgenic mouse, wherein said mouse exhibits a phenotype characterized by increased Th2 cytokine production relative to a corresponding wild-type mouse, comprising:

~~a) providing~~ (1) introducing an exogenous DNA molecule comprising at least a portion of a NFATp gene into a mouse embryonic stem cell such that the wild-type NFATp gene of

the embryonic stem cell is functionally disrupted; (2) introducing said transgenic mouse embryonic stem cell into a pseudopregnant mouse such that said pseudopregnant mouse produces at least one offspring comprising a functionally disrupted NFATp gene; ~~embryonic stem cell comprising wild-type NFATp and NFAT4 genes; (2) a pseudopregnant mouse; and~~ (3) ~~an exogenous nucleic acid molecules comprising at least a portion of NFATp and a NFAT4 gene, said portion comprising one or more deletions in one or more exons of said NFATp and NFAT4 genes~~;

~~b)~~ introducing an exogenous DNA molecule comprising at least a portion of a NFAT4 gene into a mouse embryonic stem cell such that the wild-type NFAT4 gene of the embryonic stem cell is functionally disrupted; (4) introducing said transgenic mouse embryonic stem cell into a pseudopregnant mouse such that said pseudopregnant mouse produces at least one offspring comprising a functionally disrupted NFAT4 gene; ~~introducing said nucleic acid molecules into said embryonic stem cell under conditions such that said nucleic acid molecule functionally disrupts at least one of said wild-type NFATp and NFAT4 genes in the genome of said embryonic stem cell to produce a transgenic embryonic stem cell; and~~

~~c) introducing said transgenic embryonic stem cells into said pseudopregnant mouse under conditions such that said pseudopregnant mouse produces progeny comprising a functionally disrupted NFATp gene and a functionally disrupted NFAT4 gene.~~

; and

(5) mating said at least one offspring with a functionally disrupted NFATp gene with said at least one offspring with a functionally disrupted NFAT4 gene and identifying subsequent offspring with both a functionally disrupted NFATp gene and a functionally disrupted NFAT4 gene.

50. (Currently Amended) A ~~murine~~ mouse transgenic cell comprising a disrupted NFATp gene and a disrupted NFAT4 gene.

51. (Currently Amended) The ~~murine~~ mouse transgenic cell of claim 50, wherein said cell is selected from the group consisting of fertilized egg cells, embryonic stem cells and lymphoid cells.

52. (New) A method for producing a transgenic mouse with a functionally disrupted NFATp gene and a functionally disrupted NFAT4 gene, wherein said mouse exhibits a phenotype characterized by increased Th2 cytokine production, comprising:

mating a transgenic mouse with a functionally disrupted NFATp gene with a transgenic mouse with a functionally disrupted NFAT4 gene and identifying subsequent progeny with both a functionally disrupted NFATp gene and a functionally disrupted NFAT4 gene, to thereby produce a transgenic mouse with a functionally disrupted NFATp gene and a functionally disrupted NFAT4 gene .